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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/880,688	06/13/2001	Annemarie Poustka	POUSTKA-2	6614

20151 7590 07/27/2007
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EXAMINER

EPPERSON, JON D

ART UNIT	PAPER NUMBER
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1639

MAIL DATE	DELIVERY MODE
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07/27/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

09/880,688

Applicant(s)

POUSTKA ET AL.

Examiner

Jon D. Epperson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 May 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 54, 56-60, 66-71, 75 and 77-86 is/are pending in the application.
- 4a) Of the above claim(s) 85 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 54, 56-60, 66-71, 75, 77-84, and 86 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Request for Continued Examination (RCE)

1. A request for continued examination (RCE) under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 5/2/07 has been entered. Claims 54, 56-64, 66-71, and 75-83 were pending. Applicants amended claims 56, 60, 66, 67, 71, 75, 77, 80, 81, 83. Applicants also added claims 84-86 and canceled claims 61-64, and 76. Therefore, claims 54, 56-60, 66-71, 75, 77-86 are currently pending. Claim 85 is withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected species (e.g., reads on an inkjet, not the elected laserjet deposition). Therefore, claims 54, 56-60, 66-71, 75, 77-84, and 86 are examined on the merits.

Those sections of Title 35, US code, not included in the instant action can be found in previous office actions.

Withdrawn Objections/Rejections

2. The objection to claim 71 denoted "A" is withdrawn in view of Applicants' amendments thereto. The objection to claim 76 (and dependent claim 77) denoted "B" is withdrawn in view of Applicants' amendments thereto. The 35 U.S.C. § 112, second paragraph rejections denoted "A", "B", and "C" are withdrawn in view of Applicants' amendments to claim 75. The 35 U.S.C. § 112, first paragraph "new matter" rejection has been withdrawn in part in view of

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Applicants' amendments to the claims and arguments on pages 8-10 of the 5/2/07 response. The written description rejection is withdrawn in view of Applicants' amendments to claims 75, 80, and 83. The enablement rejection is withdrawn in view of Applicants' amendments to claims 75, 80, and 83. All other rejections are maintained and the arguments are addressed below.

Outstanding Objections and/or Rejections

Claim Rejections - 35 USC § 112, second paragraph

3. Claims 83 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

A. Withdrawn.

B. Withdrawn.

C. Withdrawn.

D. **Claim 83** recites the limitation "the monomers" in lines 6 and 7 and, also, "the reversibly immobilized monomers" in line 8. There is insufficient antecedent basis for these limitations in the claim. Therefore, claim 83 and all dependent claims are rejected under 35 USC 112, second paragraph.

Response

4. Applicant's arguments directed to the above 35 U.S.C. 112, second paragraph rejections were fully considered (and are incorporated in their entirety herein by reference) but were not deemed persuasive for the following reasons. Please note that the above rejection has been modified from its original version to more clearly address applicants' newly amended and/or

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added claims and/or newly amended arguments.

D. Applicants argue, "With respect to claims 80, 81 and 83, applicant has amended the claims to eliminate the rejections thereof" (e.g., see 5/2/07 Response, page 8, middle section).

This is not found persuasive for the following reasons:

This statement is false with respect to claim 83. That is, claim 83 was not amended to address this issue.

Accordingly, the 35 U.S.C. 112, second paragraph rejection cited above is hereby maintained.

Claims Rejections - 35 U.S.C. 112, first paragraph

5. Claim 83 is rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed had possession of the claimed invention. This is a new matter rejection.

A. Claims 83 was added and/or amended in the August 21, 2006 Response.

However, the Examiner cannot find support for the following limitations:

For ***claim 83 (and all dependent claims)***, the phrase "transport units at a solid state of aggregation to a suitable support" (for claim 83) represents new matter insofar as this independent claims no longer require the use of a "solid" support as set forth in the original application (e.g., see paragraph 224, "Unlike the familiar standard synthesis, the oligonucleotides are anchored on the solid support"). Thus, to the extent that these

claims now read on supports that are not “solid” (e.g., gel-like supports), this increased breadth constitutes new matter.

Response

6. Applicant’s arguments directed to the above New Matter rejection were fully considered (and are incorporated in their entirety herein by reference) but were not deemed persuasive for the following reasons. Please note that the above rejection has been modified from its original version to more clearly address applicants’ newly amended and/or added claims and/or arguments.

[1] Applicant argues, “in order to gain early issuance has amended the claims to recite solid support” (e.g., see 5/2/07 Response, page 9, paragraph 1).

[1] Claim 83 was amended to a “suitable” support not a “solid” support as was erroneously purported. Thus, Applicants’ arguments are moot. Furthermore, the specification only provides examples of using a “solid” support used in conjunction with commercially available printers that would be unsuitable for “gel-like” materials or other, non-solid forms (i.e., paper is used that can induce a positive charge to attract the negative toner particles).

[2] Applicants argue, “Support for this [i.e., the surface limitation that was removed from claims 75, 80, and 83] is found in paragraph[s] [007] and [008]. The Examiner’s attention is also directed to paragraph[s] [0179]-[0180] relating to figure 20” (e.g., see 5/2/07 Response, page 9, first full paragraph).

[2] The Examiner agrees and has deleted this portion of the rejection. Paragraphs [007]-

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[008] describe a porous solid that would contain a three-dimensional surface. However, the Examiner notes that paragraphs [0179]-[180], referred to by Applicants in their arguments, don't exist (i.e., the last paragraph in the specification on page 47 is [0177]).

[3] Applicants argue, "With respect to the Examiner's comment regarding claim 75, applicant has eliminated the phraseology 'repeating the foregoing steps' and thus the rejection is moot" (e.g., see 5/2/07 Response, page 9, middle paragraph).

[3] The Examiner agrees and has removed this portion of the rejection.

[4] Applicants argue, "With regard to the Examiner's rejection of claim 83 ... [support exists in] the Figures, in particular Figs 1, 4, 5 and 9 and it is implicit that there is a temporary blocking. Also on page 2, paragraph [015], the conventional method is contrasted to the instant method where monomers can be applied at different times to a support and at the same time block the coupling reaction of the monomer to the support. Furthermore, on page 3, paragraph [026], it is set forth that the particles are repeatedly applied to the support ... in each case followed by the mobilization of the immobilized substance described above, linking ... and detaching temporary protective group. While this could be worded more artfully, the paragraph describes the advantage of the present method where the monomers can be applied at different times to a support and at the same time block the coupling reaction of the monomers to the support"

[4] The Examiner agrees and has removed this portion of the rejection.

Accordingly, the New Matter rejection cited above is hereby maintained.

New Rejections

Claim Rejections - 35 USC § 112, second paragraph

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 54, 56-60, 66-71, 75, 77-86 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

A. **Claim 57, 78, and 79** recite, "the range" in either line 1 or 2. There is insufficient antecedent basis for this limitation in the claim. The Examiner recommends "a range" for correction. Therefore, claim 57 and all dependent claims are rejected under 35 USC 112, second paragraph.

B. **Claim 60** recites, "the start of the linking reaction" in either line 3. There is insufficient antecedent basis for this limitation in the claim. For example, it is unclear to which "linking reaction" Applicants are referring to (e.g., linking to substrate, linking to first layer, linking to second layer, etc.). Therefore, claim 60 and all dependent claims are rejected under 35 USC 112, second paragraph.

C. **Claim 67** recites an improper Markush format. For example, claim 67 reads "wherein the monomers contain at least one element or bind to such particles that include an element selected from the group consisting of: magnetic constituents; diphenyl formamide; preliminary stages for monomers, dimers or trimers suitable for combinatorial synthesis; preliminary stages of D or L amino acids, nucleosides or derivatized nucleosides or their mirror images or their derivatives; polystyrene and cellulose." The term "or" must only be used once as outlined below. It is suggested to

use standard Markush language; see MPEP 2173.05(h) concerning alternative expressions:

Alternative expressions are permitted if they present no uncertainty or ambiguity with respect to the question of scope or clarity of the claims. One acceptable form of alternative expression, which is commonly referred to as a Markush group, recites members as being "selected from the group consisting of A, B and C." See *Ex parte Markush*, 1925 C.D. 126 (Comm'r Pat. 1925).

When materials recited in a claim are so related as to constitute a proper Markush group, they may be recited in the conventional manner, or alternatively. For example, if "wherein R is a material selected from the group consisting of A, B, C and D" is a proper limitation, then "wherein R is A, B, C or D" shall also be considered proper.

Therefore, claims 67 and all dependent claims are rejected under 35 U.S.C. 112, second paragraph.

D. **Claims 75, 80, 83, and 85** recite, "the covalent linking" in the second to last line of each claim. There is insufficient antecedent basis for this limitation in the claim.

Therefore, claim 75, 80, 83, and 85 and all dependent claims are rejected under 35 USC 112, second paragraph.

E. **Claim 80** recites, "repeating the steps" in the line 17. There is insufficient antecedent basis for this limitation in the claim. Claim 17 recites multiple steps and it is unclear which of these steps is being referred to. Therefore, claim 17 and all dependent claims are rejected under 35 USC 112, second paragraph.

Claim Rejections - 35 USC § 112, first paragraph

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

8. Claims 54, 56-60, 66, 68-71, 75, 77-84, and 86 are rejected under 35 U.S.C. 112, first

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paragraph, as based on a disclosure that is not enabling. The object of administration (e.g., a host) is critical or essential to the practice of the invention, but not included in the claim(s) is not enabled by the disclosure. See *In re Mayhew*, 527 F.2d 1229, 188 USPQ 356 (CCPA 1976). For example, Applicants state that both the laser printer and colour laser printer require “magnetic particles” for successful operation (e.g., see specification, pages 28 and 29; see also figures 8 and 9). That is, they wouldn’t bind to the magnetic roller (element 21) without them. Also, the particles must possess triboelectric properties because they wouldn’t become charged upon contact to the roller without it. Thus, the magnetic/triboelectric particles are critical and/or essential to the practice of the currently claimed invention that uses “laser” printing (e.g., see newly amended independent claims 75, 80, and 83 adding the “laser” limitation; note also that dependent claim 67 was not rejected because it claims the essential “magnetic” particles). Applicants can overcome this rejection by adding “magnetic” particles to the independent claims similar to that set forth in claim 67.

In addition, the Examiner notes that it would take undue experimentation to practice the claimed invention without magnetic/triboelectric particles. Factors to be considered may include: (1) the quantity of experimentation necessary, (2) the amount of direction or guidance presented, (3) the presence or absence of working examples, (4) the nature of the invention, (5) the state of the prior art, (6) the relative skill of those in the art, (7) the predictability or unpredictability of the art, and (8) the breadth of the claims. In *re Wands*, 858 F.2d at 737, 8 USPQ2d at 1404. Here, Applicants admit (e.g., see citations above) that such particles would not bind to the roller and/or would not acquire the requisite charge for laser printing. In addition, Applicants provide no guidance for how to operate a laser printer without the use of particles with

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magnetic/tirobelectric properties.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jon D Epperson whose telephone number is (571) 272-0808. The examiner can normally be reached Monday-Friday from 9:00 to 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James (Doug) Schultz can be reached on (571) 272-0763. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-1600.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jon D. Epperson, Ph.D.

July 19, 2007

JON EPPERSON
PRIMARY EXAMINER

